Patent claims

1. Method for conversion of an input document data stream (105) that corresponds to one of many possible input data formats (AFP, MO:DCA, line data, CSV, RDI) into an output document data stream (106) that corresponds to one of many possible input data formats (AFP, MO:DCA, PCL, PostScript), whereby the input document data stream (105) is converted into an internal data format (66), document formatting information that establishes the representation of the data in the output format is added as needed to the data in the internal data format (66), and the data are then converted into the output data format.

2. Method, in particular according to claim 1, for conversion of an input document data stream (105) that (AFP, MO:DCA, line data, CSV, RDI) into an output document data stream (106) that corresponds to one of many possible input data formats (AFP, MO:DCA, PCL, PostScript), whereby the input document data stream (105) is converted into an internal data format (66), document formatting information that establishes how the content of the data stream in the internal data format is represented in the output data format is added as needed, controlled by a document template, to the data in the internal data format (66), and the data are output in the output data format (AFP, MO:DCA, PCL, PostScript).

3. Method according to claim 1 or 2, whereby the input document data stream (105) is converted into an internal data format (66), with formatted data that contain format specifications and raw data that contain no format specifications, for format-adapted and speed-optimized processing of the input document data stream (105).

4. Method according to claim 3, whereby formatting data are added to the raw data by means of predetermined rules and an output data stream (106) that

has a predetermined format is formed from the data of the internal data format.

5. Method according to claim 2 or according to claim 2 in connection with any of the claims 3 through 4, whereby the document template (112) is formed using a design data set (62) and the conversion into the internal data format (66) occurs via rules that use the design data set (62).

6. Method according to claim 2 or according to claim 2 in connection with any of the claims 3 through 5, whereby the document template (112) is generated using free programmed static or dynamic elements.

7. Method according to any of the preceding claims, whereby types are associated per field with the design data set in a firs, preparatory design phase, whereby formatting instructions are associated with a first type group and no formatting is associated with a second type group, and whereby in a second, productive processing phase all data sets of the input document data stream are examined by type and data that are associated with the first type group are additionally formatted and data that are associated with the second type group receive no additional formatting.

8. Method according to any of the preceding claims, whereby a freely definable rule file (77) is formed in the design phase, the mapping rules of which rule file (77) are automatically derived and/or derived such that they are freely editable from the design set (62), from the input document data (105) and/or from other rules from auxiliary files (119).

9. Method according to the claims 6 and 8, whereby the assembly of the formatting rules occurs during the design time, whereby in particular a document template is formed.

10. Method according to any of the preceding claims, whereby the formatted data are converted into an in particular device-specific output data format.

11. Method according to any of the previous claims, whereby the normalized data stream (104) and/or the formatted data stream (114) are device-specifically optimized in the processing.

12. Method according to any of the preceding claims, whereby the input data format (105), the output data format (106) and/or the document formatting information to be added are selectable.

13. Method according to any of the preceding claims, whereby pre-formatted data are processed in a first formatting stage and raw data are processed in a second processing stage.

14. Method according to claim 13, whereby the raw data in particular are used multiple times in components (93, 95, 96) in the second processing stage.

15. Method according to claim 14, whereby a component comprises graphical elements (96) and/or indexing information.

16. Method according to any of the preceding claims, whereby the document formatting information comprises paper reproduction information (N-up, duplex, impositioning).

17. Method according to any of the preceding claims, whereby the document formatting information comprises print pre- and/or post-processing information.

18. Method according to any of the preceding claims, whereby the input data stream is an SAP/RDI data stream, a line data data stream or a metacode data stream.

5 19. Method according to any of the preceding claims, whereby the output document data stream (106) is an Advanced Function Presentation data stream in which a first group of formatting information is provided via a pagedef file and a second group of formatting information is contained in the input document data stream (105) and/or in the normalized raw data
10 stream (104).

20. Method according to any of the preceding claims, whereby activation signals for a display medium (16a) or a computer (12) comprising a display medium are formed from the normalized output document data stream.

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21. Method according to any of the preceding claims, whereby the output document data stream (106, 120, 121) is represented on a display medium (16a) in particular in a rastered manner (101), and can be edited such that effected changes change the document template and therewith retroact on
20 the unrastered output document data stream (106, 120, 121)

22. Method according to any of the preceding claims, whereby the output document data stream (106) is output to an e-mail system (12), a fax device and/or an Internet server, in particular after passing through an output
25 device-adapted conversion process.

23. Device for implementation of a method according to any of the claims 1 through 22.

30 24. Device according to claim 23, comprising a computer (3, 12, 12a, 16).

25.   Data processing system comprising a device according to any of the claims 23 or 24.

26.   Data processing system according to claim 25, comprising a printing
5   system.

27.   Computer program product with which a method according to the claims 1 through 22 can be effected upon its execution on a computer.

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